PRELIMINARY AMENDMENT dated April 5, 2005
Serial No. 10/812,581

IN THE CLAIMS

Claim 1. (Original) A method of negotiating resources on a switched underlay network, the method comprising the steps of:

receiving a request for scheduled resources from a requesting entity;

ascertaining requesting entity business policy associated with the request;

ascertaining switched underlay network business policy associated with the request; and

negotiating the request based on the request, the requesting entity business policy, and the switched underlay network business policy to resolve a negotiated request.

Claim 2. (Original) The method of claim 1, further comprising the step of ascertaining anticipated network conditions associated with the request, and wherein the step of negotiating the request is based additionally on the anticipated network conditions.

Claim 3. (Original) The method of claim 1, wherein the request is underconstrained, and wherein the negotiated request is also underconstrained.

Claim 4. (Original) The method of claim 1, wherein the requesting entity business policy includes parameters associated with the value to the entity of having the request fulfilled within at least one of a particular cost structure, a particular time window, and at a particular capacity range.

Claim 5. (Original) The method of claim 1, wherein the requesting entity business policy includes at least one parameter relating to the size of the transfer, the importance of the transfer, the timing of the transfer, the speed of the transfer, and the amount of money or other expense associated with the transfer.

Claim 6. (Original) The method of claim 1, wherein the switched underlay network policy includes at least one parameter relating to the size of the transfer, the timing of the transfer, current and anticipated network conditions, other scheduled transfers, whether the new transfer would displace other scheduled transfers, and the demand for network resources.

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Claim 7. (Original) The method of claim 1, wherein the step of negotiating the request comprises optimizing scheduling of the request based on the requesting entity business policy, and the switched underlay network business policy.

Claim 8. (Original) The method of claim 7, further comprising passing the scheduled request to a data transfer scheduling service for scheduling of the request on the network.

Claim 9. (Original) The method of claim 1, wherein the resources are lambdas.

Claim 10. (Original) A method of handling requests for resources on a switched underlay network, the method comprising the steps of:

receiving, by a data transfer scheduling service, an underconstrained request for resources;

passing the underconstrained request for resources to a resource negotiation service to enable policy to be implemented to further constrain the request to create a modified request and implement accounting entries associated with the modified request; and

returning the modified request to the data transfer scheduling service to be scheduled on the switched underlay network.

Claim 11. (Original) The method of claim 10, further comprising the step of scheduling the modified request.

Claim 12. (Original) An apparatus for negotiating requests for switched underlay network resources, the apparatus comprising:

a resource negotiation service;

a data management service, said data management service being configured to perform network topology discovery, route creation, and path allocation; and

a network resource manager, said network resource manager being configured to interface network devices in the switched underlay network to schedule network resources on the switched underlay network;

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wherein at least one of the data management service and the network resource manager is configured to schedule underconstrained requests for the network resources on the switched underlay network.

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